

RECEIVED
CENTRAL FAX CENTER

AUG 25 2006

Docket No. F-7841

Ser. No. 10/665,193

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1-10. (Cancelled)

11. (Currently Amended) A wavelength conversion laser apparatus ~~according to claim 9 or 10, comprising:~~

a semiconductor light emitting device;

an optical fiber having a tunable Bragg grating provided therein and a fiber input end and a fiber output end;

an optical resonator formed of the semiconductor light emitting device arranged to input light into said optical fiber and receive reflected light from said optical fiber to effect a resonance at a resonance wavelength determined by a grating wavelength of said Bragg grating, said optical resonator providing optical resonator output light at said resonance wavelength at an output end of said optical fiber;

a wavelength conversion device formed of a nonlinear optical crystal formed from one of the group consisting of lithium niobate, lithium tantalate, MgO doped lithium niobate, and MgO doped lithium tantalate, and having a wavelength

Docket No. F-7841

Ser. No. 10/665,193

range for input light ranging from 900 nm to 1100nm, said wavelength conversion device receiving as the input light said optical resonator output light from said optical resonator and releasing a harmonic of the input light;

a resonant wavelength adjusting means for adjusting the resonance wavelength of the optical resonator output light in accordance with temperature so as to maintain the harmonic of the light from the wavelength conversion device substantially constant regardless of a change in the temperature of the wavelength conversion device by substantially matching a temperature induced shift of said wavelength range for input light of said wavelength conversion device;

the resonant wavelength adjusting means being a grating expanding means which is heat sensitive for expanding the tunable Bragg grating in a lengthwise direction of the tunable Bragg grating;

the grating expanding means being a bar-like heat-sensitive expandable member which secures the optical fiber at two locations between which the tunable Bragg grating is located, wherein the heat-sensitive expandable member has a linear expansion coefficient of $5 \cdot 10^{-5} [K^{-1}]$ - $6 \cdot 10^{-5} [K^{-1}]$.

12. (Currently Amended) A wavelength conversion laser apparatus according to claim 9 or 10, comprising:

a semiconductor light emitting device;

Docket No. F-7841

Ser. No. 10/665,193

an optical fiber having a tunable Bragg grating provided therein and a fiber input end and a fiber output end;

an optical resonator formed of the semiconductor light emitting device arranged to input light into said optical fiber and receive reflected light from said optical fiber to effect a resonance at a resonance wavelength determined by a grating wavelength of said Bragg grating, said optical resonator providing optical resonator output light at said resonance wavelength at an output end of said optical fiber;

a wavelength conversion device formed of a nonlinear optical crystal formed from one of the group consisting of lithium niobate, lithium tantalate, MgO doped lithium niobate, and MgO doped lithium tantalate, and having a wavelength range for input light ranging from 900 nm to 1100nm, said wavelength conversion device receiving as the input light said optical resonator output light from said optical resonator and releasing a harmonic of the input light;

a resonant wavelength adjusting means for adjusting the resonance wavelength of the optical resonator output light in accordance with temperature so as to maintain the harmonic of the light from the wavelength conversion device substantially constant regardless of a change in the temperature of the wavelength conversion device by substantially matching a temperature induced shift of said wavelength range for input light of said wavelength conversion device;

Docket No. F-7841

Ser. No. 10/665,193

the resonant wavelength adjusting means being a grating expanding means which is heat sensitive for expanding the tunable Bragg grating in a lengthwise direction of the tunable Bragg grating; and

the grating expanding means being a bar-like heat-sensitive expandable member which secures the optical fiber at two locations between which the tunable Bragg grating is located. wherein the heat-sensitive expandable member is made of a plastic material.

13-20. (Cancelled)